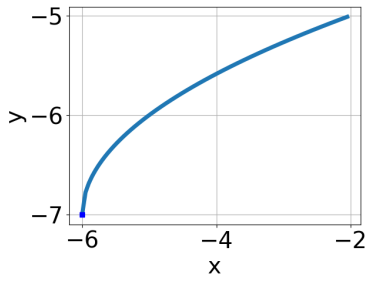
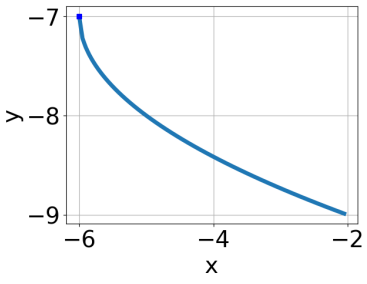
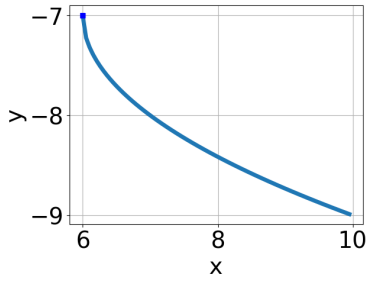
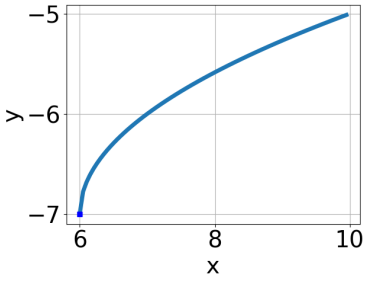
1. Choose the graph of the equation below.

$$f(x) = \sqrt{x+6} - 7$$

A.


C.


B.


D.


E. None of the above.

---

2. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{14x^2 + 10} - \sqrt{39x} = 0$$

A. $x \in [-0.2, 1.2]$

B. All solutions lead to invalid or complex values in the equation.

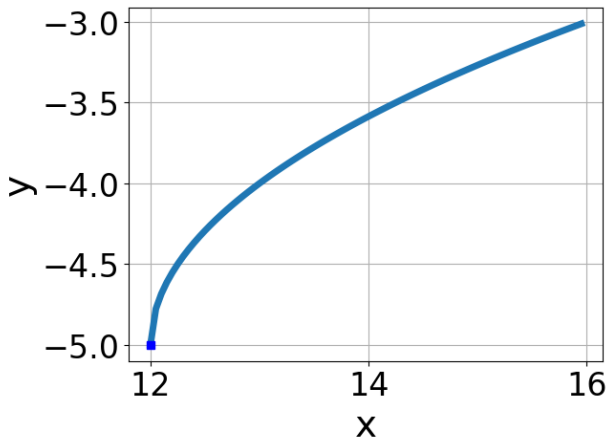
C. $x_1 \in [-0.2, 1.2]$ and $x_2 \in [2.5, 5.5]$

D. $x_1 \in [-4.5, -0.9]$ and $x_2 \in [-5.29, 0.71]$

E. $x \in [1.9, 5.3]$

---

3. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x-12} - 5$

B. $f(x) = -\sqrt[3]{x-12} - 5$

C. $f(x) = \sqrt[3]{x+12} - 5$

D. $f(x) = -\sqrt[3]{x+12} - 5$

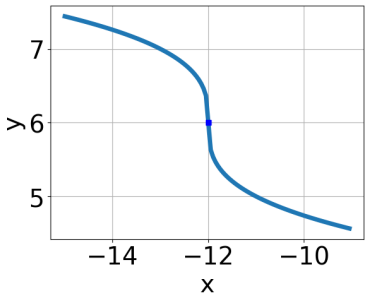
E. None of the above

---

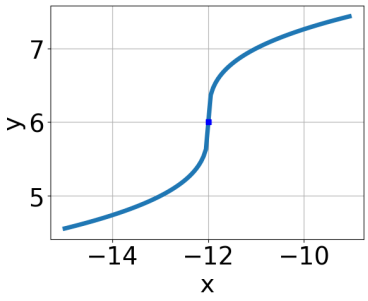
4. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x+12} + 6$$

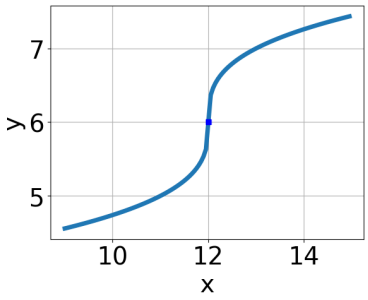
A.



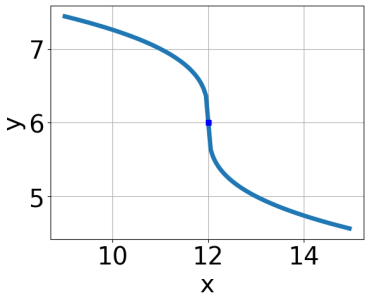
C.



B.



D.



E. None of the above.

---

5. What is the domain of the function below?

$$f(x) = \sqrt[5]{9x+3}$$

A. The domain is $(-\infty, a]$, where $a \in [-2.33, 2.67]$

B. $(-\infty, \infty)$

C. The domain is $[a, \infty)$, where $a \in [-5, -2]$

D. The domain is $[a, \infty)$, where $a \in [-2.33, 3.67]$

E. The domain is $(-\infty, a]$, where $a \in [-5, -2]$

---

6. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{2x+2} - \sqrt{-4x-4} = 0$$

A. $x \in [-0.9, 4]$

B. $x \in [-2.2, -0.1]$

C. $x_1 \in [-2.2, -0.1]$ and $x_2 \in [-2, 3]$

D. $x_1 \in [-2.2, -0.1]$ and $x_2 \in [-2, 3]$

E. All solutions lead to invalid or complex values in the equation.

---

7. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{2x-5} - \sqrt{-5x-2} = 0$$

A. $x \in [-0.04, 0.7]$

B. $x \in [0.86, 1.64]$

C. All solutions lead to invalid or complex values in the equation.

D. $x_1 \in [-0.8, -0.19]$ and $x_2 \in [0.5, 5.5]$

E. $x_1 \in [-0.04, 0.7]$ and $x_2 \in [0.5, 5.5]$

---

8. What is the domain of the function below?

$$f(x) = \sqrt[4]{-7x - 4}$$

A. $(-\infty, \infty)$

B. $(-\infty, a]$, where $a \in [-4.6, -1.5]$

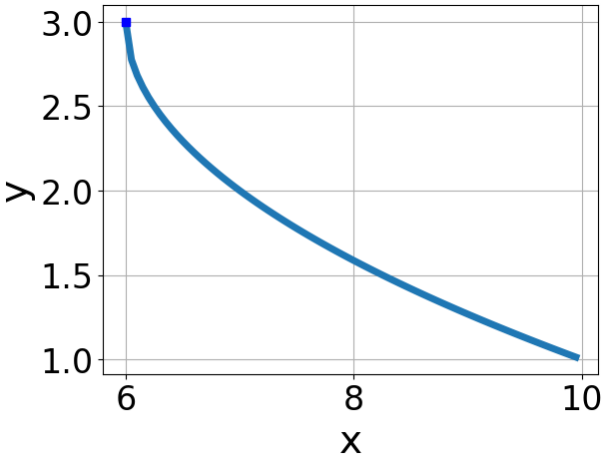
C. $[a, \infty)$, where $a \in [-5, -0.7]$

D. $(-\infty, a]$, where $a \in [-0.8, 1.6]$

E. $[a, \infty)$, where $a \in [-0.7, 0.2]$

---

9. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x+6} + 3$

B. $f(x) = \sqrt{x-6} + 3$

C. $f(x) = -\sqrt{x-6} + 3$

D. $f(x) = \sqrt{x+6} + 3$

E. None of the above

---

10. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{18x^2 + 72} - \sqrt{90x} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x \in [-2.3, 2.4]$

C. $x_1 \in [-2.3, 2.4]$ and $x_2 \in [4, 8]$

D. $x \in [2.4, 4.1]$

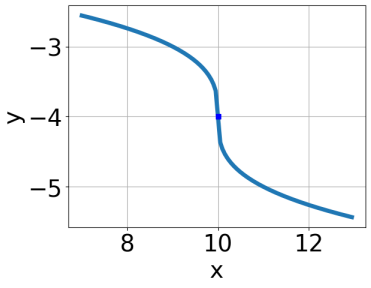
E. $x_1 \in [-5.9, -3.9]$ and $x_2 \in [-4, 2]$

---

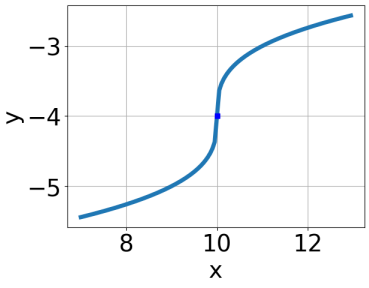
11. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x - 10} - 4$$

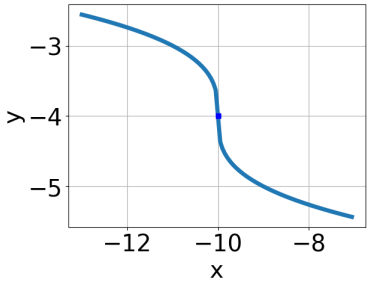
A.



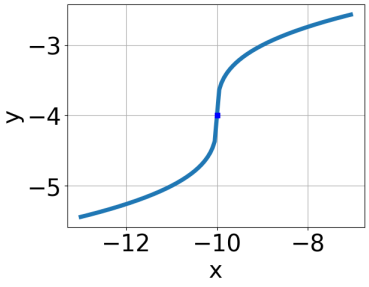
C.



B.



D.



E. None of the above.

---

12. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-56x^2 + 12} - \sqrt{-26x} = 0$$

A. $x \in [0.48, 0.99]$

B. $x_1 \in [-0.12, 0.53]$ and $x_2 \in [-0.25, 4.75]$

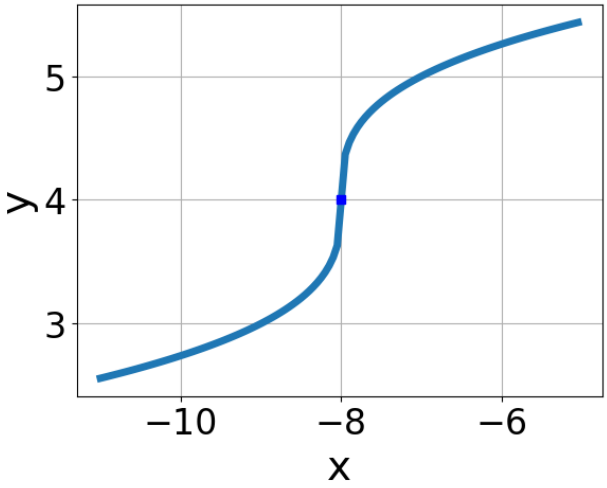
C. All solutions lead to invalid or complex values in the equation.

D. $x_1 \in [-0.84, -0.19]$ and $x_2 \in [-0.25, 4.75]$

E. $x \in [-0.84, -0.19]$

---

13. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt[3]{x+8} + 4$

B. $f(x) = \sqrt[3]{x-8} + 4$

C. $f(x) = -\sqrt[3]{x-8} + 4$

D. $f(x) = \sqrt[3]{x+8} + 4$

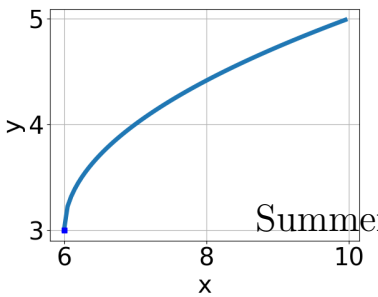
E. None of the above

---

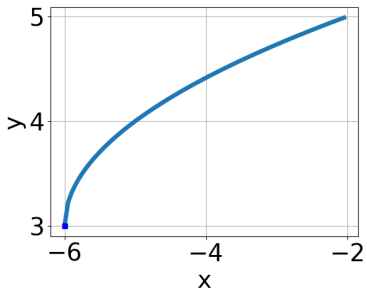
14. Choose the graph of the equation below.

$$f(x) = -\sqrt{x-6} + 3$$

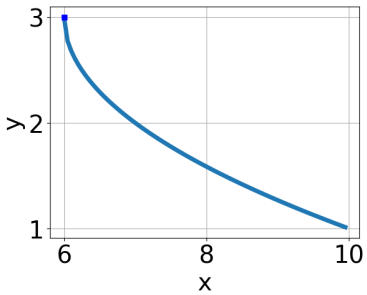
A.



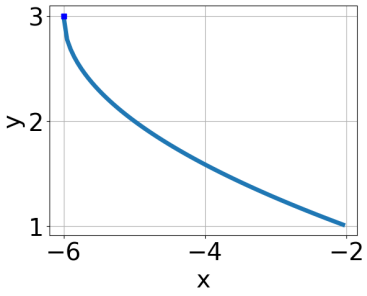
B.



C.



D.



E. None of the above.

---

15. What is the domain of the function below?

$$f(x) = \sqrt[5]{-5x + 6}$$

A. The domain is $[a, \infty)$, where $a \in [1.06, 1.44]$

B. The domain is $[a, \infty)$, where $a \in [0.72, 1.05]$

C. The domain is $(-\infty, a]$, where $a \in [0.88, 1.42]$

D. $(-\infty, \infty)$

E. The domain is $(-\infty, a]$, where $a \in [0.58, 0.88]$

---

16. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{8x + 6} - \sqrt{2x - 8} = 0$$

A. $x_1 \in [-3.04, -1.63]$ and $x_2 \in [-5.75, 3.25]$

B. $x \in [0.14, 0.6]$

C. All solutions lead to invalid or complex values in the equation.

D. $x \in [-3.04, -1.63]$

E. $x_1 \in [-1.66, -0.2]$ and $x_2 \in [2, 9]$

---

17. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{8x+4} - \sqrt{7x+8} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x \in [3.31, 4.38]$

C. $x_1 \in [-1.15, -0.8]$ and $x_2 \in [-3.5, 1.5]$

D. $x_1 \in [-1.05, -0.39]$ and $x_2 \in [2, 9]$

E. $x \in [-12.21, -11.83]$

---

18. What is the domain of the function below?

$$f(x) = \sqrt[7]{-9x-3}$$

A. $(-\infty, \infty)$

B. The domain is $[a, \infty)$, where $a \in [-4, -2]$

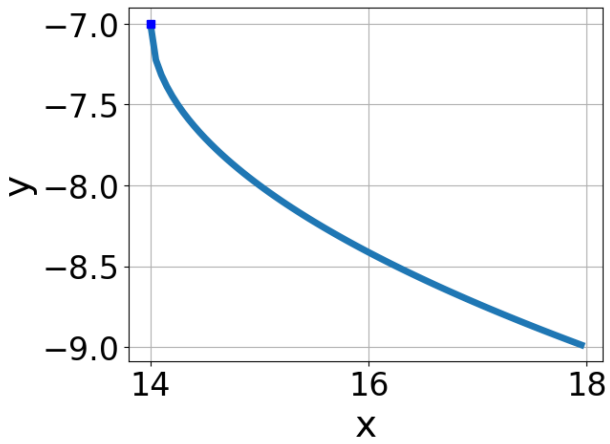
C. The domain is $(-\infty, a]$, where $a \in [-1.7, -0.2]$

D. The domain is $(-\infty, a]$, where $a \in [-3.9, -1.9]$

E. The domain is $[a, \infty)$, where $a \in [-1.33, 0.67]$

---

19. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x - 14} - 7$

B. $f(x) = \sqrt{x + 14} - 7$

C. $f(x) = -\sqrt{x - 14} - 7$

D. $f(x) = -\sqrt{x + 14} - 7$

E. None of the above

---

20. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{30x^2 + 36} - \sqrt{-69x} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x_1 \in [-0.08, 1.88]$ and $x_2 \in [1.33, 1.81]$

C. $x \in [-1.14, -0.53]$

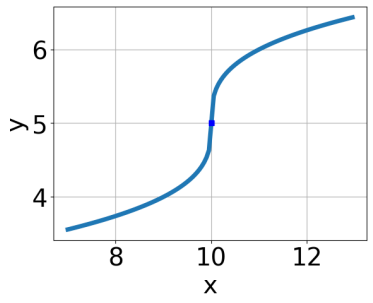
D. $x_1 \in [-2.84, -1.13]$ and $x_2 \in [-2.44, -0.24]$

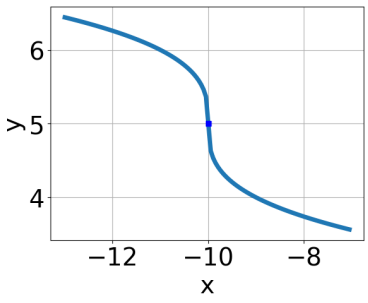
E. $x \in [-2.84, -1.13]$

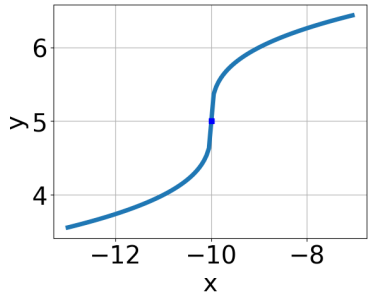
---

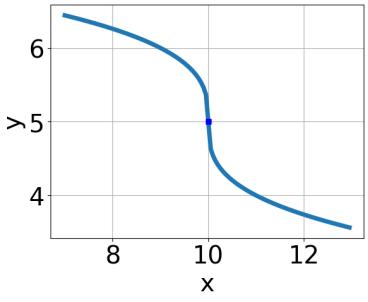
21. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x + 10} + 5$$

A.


C.


B.


D.


E. None of the above.

---

22. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-32x^2 - 56} - \sqrt{88x} = 0$$

A. $x_1 \in [-2.57, -1.51]$ and $x_2 \in [-2.7, 0.5]$

B. $x \in [-1.08, -0.6]$

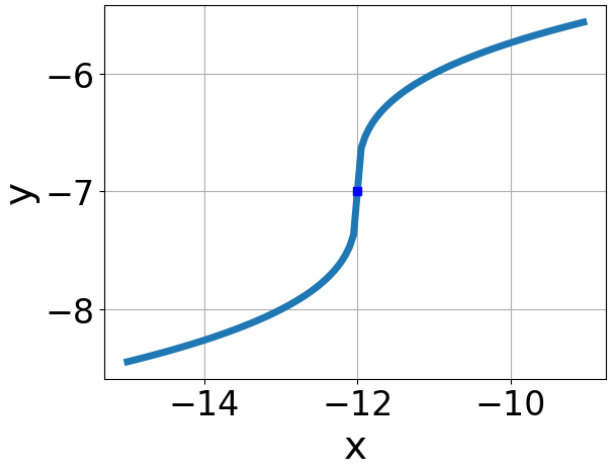
C. All solutions lead to invalid or complex values in the equation.

D. $x_1 \in [0.74, 2.1]$ and $x_2 \in [-0.2, 3.2]$

E. $x \in [-2.57, -1.51]$

---

23. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x-12} - 7$

B. $f(x) = -\sqrt[3]{x-12} - 7$

C. $f(x) = \sqrt[3]{x+12} - 7$

D. $f(x) = -\sqrt[3]{x+12} - 7$

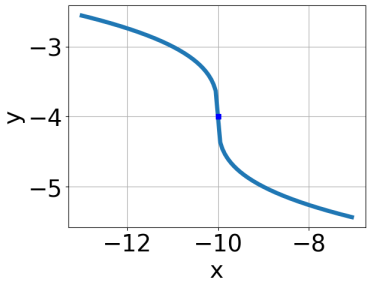
E. None of the above

---

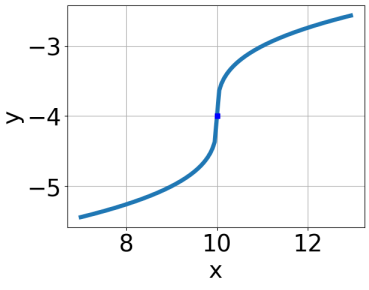
24. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x-10} - 4$$

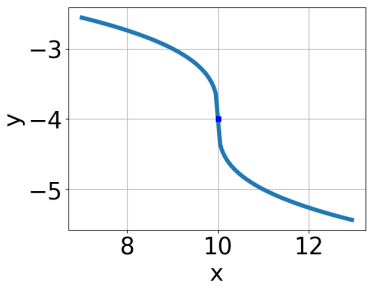
A.



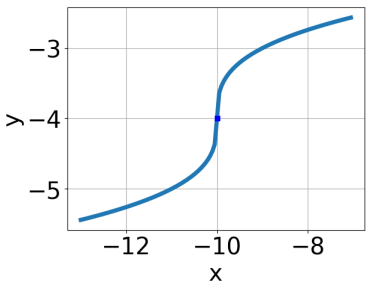
C.



B.



D.



E. None of the above.

---

25. What is the domain of the function below?

$$f(x) = \sqrt[8]{3x+8}$$

A. $(-\infty, a]$, where $a \in [-0.38, 1.62]$

B. $[a, \infty)$, where $a \in [-3.1, -1.8]$

C. $[a, \infty)$, where $a \in [-0.7, 0.7]$

D. $(-\infty, a]$, where $a \in [-8.67, -1.67]$

E. $(-\infty, \infty)$

---

26. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{4x+5} - \sqrt{6x+3} = 0$$

A. $x \in [2.5, 4.7]$

B. $x_1 \in [-1.8, -0.8]$ and $x_2 \in [1, 3]$

C. $x_1 \in [-1.8, -0.8]$ and $x_2 \in [-1.5, 0.5]$

D. $x \in [-0.6, 2]$

E. All solutions lead to invalid or complex values in the equation.

---

27. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{3x+9} - \sqrt{5x-9} = 0$$

A. $x \in [6, 11]$

B. All solutions lead to invalid or complex values in the equation.

C. $x_1 \in [-5, -1]$ and $x_2 \in [0.8, 3.8]$

D. $x_1 \in [-5, -1]$ and $x_2 \in [5, 14]$

E. $x \in [-2, 5]$

---

28. What is the domain of the function below?

$$f(x) = \sqrt[8]{8x + 6}$$

A. $[a, \infty)$, where $a \in [-1.77, -1.02]$

B. $[a, \infty)$, where $a \in [-1.06, -0.68]$

C. $(-\infty, \infty)$

D. $(-\infty, a]$, where $a \in [-1.91, -1.11]$

E. $(-\infty, a]$, where $a \in [-1.07, -0.23]$

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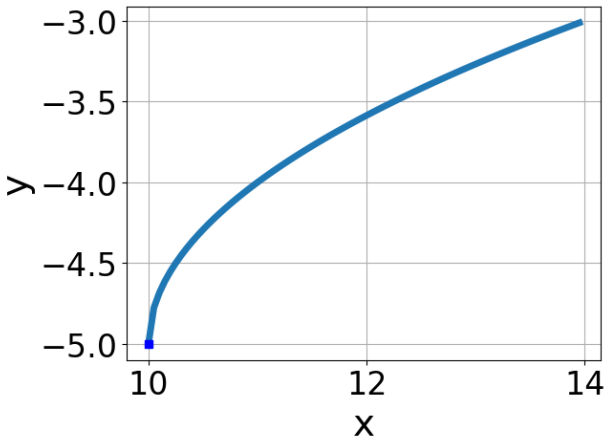
29. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x - 10} - 5$

B. $f(x) = -\sqrt{x - 10} - 5$

C. $f(x) = \sqrt{x + 10} - 5$

D. $f(x) = -\sqrt{x + 10} - 5$

E. None of the above

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30. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-6x^2+48}-\sqrt{12x}=0$$

A. $x_1 \in [-1, 11]$ and $x_2 \in [3.4, 5.9]$

B. All solutions lead to invalid or complex values in the equation.

C. $x_1 \in [-6, 0]$ and $x_2 \in [1.7, 3.1]$

D. $x \in [-6, 0]$

E. $x \in [-1, 11]$